

Microbiology (Russian Federation) 2013 vol.82 N1, pages 52-58

Construction and characterization of the *Bacillus* strain with the inactivated phytase gene

Mukhametzyanova A., Marenova I., Sharipova M.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

The *Bacillus subtilis* dphy strain with the inactivated phytase gene was obtained. The phytase genes in bacilli displayed high homology; the respective enzymes belonged to the class of β -propeller phosphatases. Physiological and morphological features of the recombinant strain were determined and its sporulation was studied. The level of biomass accumulation was characterized under different conditions of bacterial growth: at different values of pH, temperature, and medium salinity. It is concluded that phytases may participate in stress response formation. © 2013 Pleiades Publishing, Ltd.

<http://dx.doi.org/10.1134/S0026261713010098>

Keywords

bacilli, gene inactivation, phytases, phytate